

WHAT IS CLAIMED IS:

1. A magnetic disk apparatus comprising:

a head having a recording/reproducing device for writing and reading out a servo signal onto and from a magnetic disk;

an actuator for moving said head to a position above said magnetic disk in a servo track movement operation;

a range limiting means for limiting a movable range of said actuator;

a range specifying means for setting a specific range of said actuator in said movable range of said actuator; and

a control means for writing a servo signal into said specific range at servo track movement pitch based on servo tracks recorded with said servo signal, correcting said servo track movement pitch on the basis of the number of servo tracks in said specific range and executing control to write said servo signal at corrected servo track movement pitch.

2. A magnetic disk apparatus comprising:

a head having a recording/reproducing device for writing and reading out a servo signal onto and from a magnetic disk;

an actuator having a head arm for supporting and moving said head to a position above said magnetic disk in a servo track movement operation and a driving means for driving said head arm;

a range limiting stopper for limiting a movable range of said actuator;

a range specifying stopper for setting a specific range of said actuator in said movable range of said actuator; and

a control unit for writing a servo signal into said specific range at servo track movement pitch based on servo tracks recorded with said servo signal, correcting said servo track movement pitch on the basis of the number of servo tracks in said specific range and executing control to write said servo signal at corrected servo track movement pitch.

3. A magnetic disk apparatus according to claim 2,

wherein, if a result of comparison of the number of servo tracks recorded with said servo signal in said specific range with a predetermined value indicates that the number of servo tracks is greater than said predetermined value, said servo track movement pitch is increased and a servo signal is recorded onto areas outside said specific range at said increased servo track movement pitch.

4. A magnetic disk apparatus according to claim 2,

wherein said specific range is a predetermined range in said movable range of said actuator starting from an innermost circumference in said movable range.

5. A magnetic disk apparatus according to claim 4,

wherein said range limiting stopper also serves as a portion of said range specifying stopper.

6. A magnetic disk apparatus according to claim 4,

wherein said specific range is a set range smaller than

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30% of an entire area in which a servo signal is to be recorded.

7. A magnetic disk apparatus according to claim 2,
wherein:

said range specifying stopper includes an intermediate
5 stopper; and

a state of contact of said actuator with said intermediate
stopper is detected from said intermediate stopper.

8. A servo signal recording method for recording a servo
signal into a specific range of a magnetic disk in a magnetic
10 disk apparatus having a head having a recording/reproducing
device for writing and reading out a servo signal onto and from
said magnetic disk and an actuator for moving said head to a
position above said magnetic disk in a servo track movement
operation, said servo signal recording method comprising the
15 steps of:

writing said servo signal into said specific range at servo
track movement pitch based on servo tracks recorded with a servo
signal;

20 detecting the number of servo tracks recorded with a servo
signal in said specific range;

comparing said detected number of servo tracks recorded
with a servo signal with a set value;

25 correcting said servo track movement pitch at which said
servo signal is written into said specific range on the basis
of a comparison result; and

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writing said servo signal at corrected servo track movement pitch.

9. A servo signal recording method according to claim 8, wherein, if a result of comparison of the number of servo tracks recorded with said servo signal in said specific range with a predetermined value indicates that the number of servo tracks is greater than said predetermined value, said servo track movement pitch is increased and a servo signal is recorded onto areas outside said specific range at said increased servo track movement pitch.

10. A servo signal recording method according to claim 8,

wherein, if a result of comparison of the number of servo tracks recorded with said servo signal in said specific range with a predetermined value indicates that the number of servo tracks is smaller than said predetermined value, said servo track movement pitch is reduced and a servo signal is recorded onto areas outside said specific range at said reduced servo track movement pitch.

11. A servo signal recording method according to claim 8, said servo signal recording method further comprising the steps of:

setting said specific range as a predetermined range in said movable range of said actuator starting from an innermost circumference in said movable range; and

detecting the number of servo tracks in said specific range.

12. A servo signal recording method according to claim 8, said servo signal recording method further comprising the steps of:

5 comparing the number of detected servo tracks with a tolerance of set values; and

 halting an operation to write a servo signal if the number of detected servo tracks is found greater than said tolerance.

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